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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,123	01/30/2002	Kenneth R. Wilsher	65.0372	5687

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07/15/2003

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EXAMINER

KERVEROS, JAMES C

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,123

Applicant(s)

WILSHER, KENNETH R.

Examiner

James C Kerveros

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 1-10, Group I, in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 11-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toeppen et al. (US 5900755).

Regarding Claim 1, Toeppen discloses (Figures 1 and 5) a method of calibrating a timer acquisition clock generator 114 by adjusting through an offset, having coarse measurement scaled acquisition clock 518 in which time intervals are defined by the

time period of clock 518 as boundaries and a fine measurement reference clock signal 502, in which time between boundaries is interpolated using a voltage ramp analog input 116, the method comprising:

Determining alignment of a voltage ramp analog input 116 (Figure 1 and 2) relative to the reference clock signal 502 having a known relationship to the time boundaries, also shown in (Figure 5).

Sampling the voltage ramp analog input 116 (Figures 1 and 2), with acquisition clock 124 (Figure 1), which is the same as the acquisition clock 514 (Figure 5) at a plurality of known times, in relationship to the time boundaries of scaled acquisition clock 518 and reference clock signal 502.

Toeppen does not determine the slope of the voltage ramp from the voltage samples. However, he stores in a memory 106 the digital waveform samples 120 and then he displays waveform (Figure 3), which is a plot of many well-distributed samples of the input waveform (Figure 2). The displayed waveform is a saw-toothed type with two ramps having a positive and negative slope, respectively. The slope is a function of sample distribution. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the digital waveform samples, in the device of Toeppen, in order to calculate the slope of a ramp waveform, since storing digital samples allows a visual display of the waveform.

Regarding Claim 2, aligning the voltage ramp analog input 116 (Figure 1 and 2) relative to the time interval boundaries of the reference clock signal 502, also (Figure 5)

Regarding Claims 3, 4, Toeppen defines the time intervals by clock 518 at a first frequency defined by a frequency divider 512 (Figure 5), further comprising a phase locked loop phase detector 504, which compares clock 518 to the reference clock 502 at second frequency, where the output of the phase detector 520 defines the phase relationship between the reference clock 502 and the acquisition clock 518, described in (column 3, lines 5-20).

Allowable Subject Matter

Claims 5-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art reference does not teach or suggest, regarding Claim 5, aligning the voltage ramp, comprising starting the voltage ramp at a defined time of periods of the reference clock following coincidence of the interval clock and the reference clock. Also, regarding Claims 6-10, the prior art reference does not teach or suggest a method including the identical steps of the claimed invention for sampling a voltage ramp, wherein determining a slope of the voltage ramp comprises calculating the ratio of difference in voltage between a second sample and a first voltage sample to the time difference between the respective known times at which the voltage is sampled to obtain the first and second voltage sample.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES C. KERVEROS at (703) 305-1081 or the examiner's supervisor, N. LE at (703) 308-1436.

Any inquiry of a general nature relating to this application should be directed to the receptionist at (703) 305-4900.

The official Fax numbers for the organization are (703-872-9318) Before-Final and (703-872-9319) After-Final Office actions.

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Date: 6/30/03
File: Non-Final Rejection

JAMES C. KERVEROS
Patent Examiner
Art Unit 2858,

By:  6/30/03